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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,362

06/13/2007

Karl Brotzmann

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INTELLECTUAL PROPERTY GROUP

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EXAMINER

YANG, JIE

ART UNIT

PAPER NUMBER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,362	<b>Applicant(s)</b> BROTZMANN, KARL	
	<b>Examiner</b> JIE YANG	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 11-13 are amended as filed on 7/17/09 and 5/5/2009, and claims 1-13 are pending. The specification has been amended to add a brief description for the drawings as filed on 5/5/2009.

### ***Status of the Previous Rejection***

The previous rejection of claims 11-13 maintain on the same ground under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is withdrawn in view of the amendments filed on 7/17/09 and 5/5/2009.

Previous objection of the specification of the informalities is withdrawn in view of the amendments filed on 5/5/2009.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102 (b) as being anticipated by Deloche et al (US 6,030,431, thereafter US'431).

US' 431 is applied to the claims 1 and 3 for the same reason as stated in the previous rejection dated 12/5/2008.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'431.

US'431 is applied to the claims 2, 11, and 13 for the same reason as stated in the previous rejection dated 12/5/2008.

Regarding claim 12, which depends on claim 11, US'431 teaches the oxygen is 30% (col.3, line 45) and fuel is added subsequently (line 48).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US'431 in view of JP 01219116 A thereafter JP'116.

US'431 in view of JP'116 is applied to the claim 4 for the same reason as stated in the previous rejection dated 12/5/2008.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'431 in view of Kundrat et al (US 5,702,502, thereafter US'502) and Hirai et al (US 4,334,921, thereafter US'921).

US'431 in view of US'502 and US'921 is applied to the claims 5 and 6 for the same reason as stated in the previous rejection dated 12/5/2008.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'431 in view of Stercho (US 20020088102 A1, thereafter PG'102).

US'431 in view of PG'102 is applied to the claims 7 and 8 for the same reason as stated in the previous rejection dated 12/5/2008.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'431 in view of Hikosaka et al (US 4,908,059, thereafter US'059).

US'431 in view of 059 is applied to the claims 9 and 10 for the same reason as stated in the previous rejection dated 12/5/2008.

### ***Response to Arguments***

Applicant's arguments filed on 5/5/2009 with respect to claims 1-13 have been fully considered but they are not persuasive.

Applicant's arguments are summarized as follows:

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A) Regarding the 102(b) rejection for claims 1, 3, and 12, Deloche et al (US'431) cannot reasonably be read to teach "from the top" as required by claim 1 because US'431 supplies gas from the side walls of the vessel and not from the top of the scrap bulk. Deloche et al (US'431) does not teach that the phase 2 lack of oxygen enrichment in claim 12.

B) Regarding the 103 (a) rejection for claims 2, 11, and 13, Deloche et al (US'431) cannot reasonably be read to teach "centrally from the top" as required by claim 2. Nothing in US'431 would lead one to the claimed distance in claim 13.

C) The JP'116 reference has nothing to do with a method in which a hot blast is applied from above. Kundrat (US'502) and Hirai et al (US'921) do not teach a process for improving energy supply to a scrap bulk, and they do not supply information that would be helpful to US'431. Stercho (PG'102) does not supply any of the deficiencies of US'431.

Responses are as follows:

Regarding the argument A), as pointed out in the rejection for the instant claims as stated in the previous office action marked 12/5/2008, US'431 teaches that the hot draft injection nozzles locate in the upper area of the side walls (Col.3, lines 38-60 of US'431), which reads on the limitation of charging hot blast to the scrap bulk "from the top" as recited in the instant claim 1 because the applicant does not limit that "the top" can not be upper area of the side walls. US'431 teaches oxygen enrichment up to 30% in the hot gas jet (Col.2, lines 47-56 of US'431), which reads on the limitation of hot

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blast jet being enriched with 30% to 50% oxygen as recited in the instant claim 12, and US'431 further teaches after melting the jet will act, in the known manner, as a post-combustion jet for additional energy input in order to reach the necessary tapping temperature (Col.4, lines 15-18 of US'431), which reads on the limitation of no or hardly any oxygen enrichment in phase 2 as recited in the instant claim 12 because US'431 does not specify that the oxygen enrichment is necessary for the post-combustion jet heating.

Regarding the argument B), US'431 teaches locating the nozzles anywhere, but they are preferably above the surface (Col.3, lines 61-64 of US'431), which includes the "centrally from the top" as required by claim 2. The Examiner further notes that the nozzles can be installed at least 30cm (0.3m) above the bath surface when using oxygen and at least 80cm above the bath surface at other time (Col.3, lines 61 -64 of US'431), which reads on the limitations of claim 13.

Regarding argument C), the applicant's arguments are against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant case, US'431 in view of JP'116 is applied to the claim 4; US'431 in view of US'502 and US'921 is applied to the claims 5 and 6; US'431 in view of PG'102 is applied to the claims 7 and 8; and US'431 in view of 059 is applied to the claims 9 and 10. The detail motivation can refer to the previous office action marked 12/5/2008.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-270-1884. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/  
Supervisory Patent Examiner, Art Unit 1793